

Predation on small passerines by the Spangled Drongo *Dicrurus bracteatus*

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ABSTRACT

The Spangled Drongo *Dicrurus bracteatus*, a partly-migratory passerine, was observed in bushland remnants in southern Sydney. Here, we report two incidents of Spangled Drongos hunting and feeding on small passerines from mixed flocks. One was seen chasing a Spotted Pardalote *Pardalotus punctatus*, consuming much of the carcass in 17 minutes. Another was seen ambushing a Brown Gerygone *Gerygone mouki* from a hunting perch. Interesting insights include proceeding to pluck feathers before the prey was dead and ingesting some of the feathers.

Key words: behaviour, hunting, predator-prey interactions

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Introduction

The Spangled Drongo *Dicrurus bracteatus* is a partly-migratory passerine found in northern and eastern Australia and South-east Asia (Blakers *et al.* 1984; Wood 1996; Tarburton 2009). It is easily recognised by the glossy black plumage and long forked tail. Typical habitats include rainforest, eucalypt forest, woodlands and mangroves (Holland 1967; Briggs 2016). In eastern Australia, they breed mainly from Cape York, northern Queensland to the Mid North Coast of New South Wales in spring and summer, with some individuals dispersing to Indonesia and New Guinea or south-eastern Australia (Blakers *et al.* 1984; Baxter 1989; Woodall 2007; Wood 2012). In the Sydney region, Spangled Drongos generally occur singly or in flocks of two to six (Wood 2012).

Detailed dietary studies on the Spangled Drongo have been few (Woinarski *et al.* 1989; Brooker 1990). It is largely recognised as an insectivore (Lamothe 1979; Wood 2012), mostly catching its prey by sally-striking mid-air (Holland 1967). Some authors have also recorded small vertebrates in the diet, as well as nectar and fruit. There have been a number of accounts of Spangled Drongos kleptoparasitising other passerines (Thorogood 1941; Bell 1967; Holland 1967; Hindwood 1970; Clancy 1985), however few actual predatory attacks on small birds have been reported.

Here, we report observations of Spangled Drongos attacking and successfully preying on two small passerines, a Spotted Pardalote *Pardalotus punctatus* and a Brown Gerygone *Gerygone mouki*.

Predation on a Spotted Pardalote

This observation was made on 26 April 2014 at Poulton Park, Hurstville Grove ($33^{\circ} 59' 1''$ S, $151^{\circ} 5' 40''$ E) in southern Sydney. The habitat is dry sclerophyll forest transitioning into mangroves. The weather was cloudy with light rainfall. At the time, an observational study of the Powerful Owl *Ninox strenua* was being carried out at this location (Mo *et al.* 2015, 2016).

At 0814 h, a mixed flock of small passerines was observed. There were 40 birds, mainly consisting of Silvereyes *Zosterops lateralis*, Grey Fantails *Rhipidura albiscapa*, Spotted Pardalotes and Golden Whistlers *Pachycephala pectoralis*. They flew in and out of shrubbery, during which they were photographed for 15 min before the predation event.

The Spangled Drongo was first noticed at 0832 h when it pursued the mixed flock. The actual capture was rapid, but not seen. Feathers descending from a branch gave away the drongo's position. It was seen with a struggling Spotted Pardalote, which it held against the branch

with its feet. The pardalote flapped its wings rapidly and kicked, but was overcome by the continuous vigorous shaking by the drongo (Fig. 1). The drongo plucked feathers from the pardalote before the latter died 3 minutes after the capture. At first, up to 20 feathers were being dropped per 10 seconds (Fig. 2).

The drongo spent 17 minutes, plucking and feeding on the pardalote. During this time, it moved from perch to perch eight times, spending approximately 2 minutes at each perch. It mostly tore at the carcass with its beak, holding it down with its feet, but also gained better purchase of the carcass by picking it up in its beak and throwing and catching the carcass in the air (Fig. 3). The head was removed by vigorous pecking, eventually being torn off, after which the drongo focussed much of the tearing at this site that was disembowelled (Fig. 4). By 0849 h, the pardalote had been mostly consumed. The drongo flew away with the remainder of the carcass.

Predation on a Brown Gerygone

This observation was made on 26 May 2004 at Myles Dunphy Reserve, Oatley ($33^{\circ} 58' 58''$ S, $151^{\circ} 4' 39''$ E), which is located 1.5 km west of Poulton Park. The habitat is wet sclerophyll forest with mangroves



Figure 1. The Spotted Pardalote *Pardalotus punctatus* struggling in the beak of the Spangled Drongo *Dicrurus bracteatus*. Photo, P. and A. Hayler



Figure 2. Feather-plucking. Photo, P. and A. Hayler



Figure 3. The carcass being thrown in the air and caught. Photo, P. and A. Hayler

occurring 300 m from where the incident occurred. The weather was partly cloudy and not raining when the observation was made at midday.

A Spangled Drongo was perched on a dead branch, which was apparently used as a hunting perch. A mixed flock of 15 small passerines moved through the area, darting between positions in the understorey. The flock consisted of Brown Gerygones, Silvereyes, Eastern Spinebills *Acanthorhynchus tenuirostris*, a Rose Robin *Petroica rosea* and a Grey Fantail. The drongo dived from its perch, almost in a spiral fashion, and snatched one of the Brown Gerygones in mid-air.

The drongo immediately returned to its earlier perch with the dead gerygone. The drongo plucked feathers vigorously from the carcass for 2 minutes, ingesting some of the feathers. Almost half of the carcass appeared to have been consumed after 5 minutes, when the drongo flew away with the kill.

Discussion

These observations are consistent with the majority of sightings of the Spangled Drongo in the Sydney region, which occur between March and May (Wood 2012). Most individuals seen during this time of the year are believed to be birds on passage (Gibson 1977). We have observed Spangled Drongos using many of the bushland remnants along the lower Georges River, mostly where forested gullies, thick understorey and some drainage occur.

Pardalotes have previously been recorded in the diet of the Spangled Drongo (Hindwood 1970), including in a hunting observation in Tewantin, Queensland (Robertson 1967). In this account, the drongo killed the Striated Pardalote *Pardalotus striatus*, but scared off the prey before it could feed. To the best of our knowledge, the only other hunting observation reported is a flock of three or four Drongos pursuing a small microchiropteran bat in flight (Strong and Cuffe 1985).



Figure 4. The Spangled Drongo *Dicrurus bracteatus* tearing at the carcass with its beak. Photo, P. and A. Hayler

In both hunting observations, Spangled Drongos targeted mixed flocks of small birds moving through the forest. This species is also known to form foraging associations with other birds, mainly cuckoo-shrikes feeding on fruits and insects (Pedler 1974; Clancy 1985; Diamond 1987). Our observations show two different methods of hunting. In the Spotted Pardalote kill, the Spangled Drongo chased the mixed flock in a direct flying attack, similar to Strong and Cuffe's (1985) observation. In the Brown Gerygone kill, the Drongo descended from a hunting perch in the manner of an ambush attack.

Other birds, all smaller in body mass, have also been recorded in the Spangled Drongo's diet. These include thornbills (*Acanthiza* spp.; Hindwood 1970), three species of honeyeaters (Graceful Honeyeater *Meliphaga gracilis*, Barnard 1926; Yellow-faced Honeyeater

Lichenostomus chrysops, Strong and Cuffe 1985; Dusky Honeyeater *Myzomela obscura*, Kuerschner 2002), two species of finches (Nutmeg Mannikin *Lonchura punctulata*, Crowhurst 1984; Zebra Finch *Taeniopygia guttata*, Wieneke in Higgins et al. 2006), the House Sparrow *Passer domesticus* (Strong and Cuffe 1985) and the Peaceful Dove *Geopelia placida* (Crowhurst 1984). In more than one third of these cases, the prey was a young animal (Barnard 1926; Strong and Cuffe 1985; Wieneke in Higgins et al. 2006).

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